

## General Information

1991  
Video: 4 Heads Rotary  
Audio: Fixed Head 1CH  
Covers Models:  
**Akai VS-F420**

## Matrix

Item	See Model
Mechanical Parts View	Akai VS-422/425 89/90 Book.
Mechanical Adjustments	Akai VS-F10/F11 91/92 Book.
Replacement Pinch Wheel	Akai VS-F260
Back Tension Adjustments	Akai VS-F310
VIF Unit	Akai VS-F260
R/C's	Akai VS-F260

Service  
AdjustmentsReplacement of the Idler Part 2  
and Review Brake Part

- 1: Remove the CASSETTE LOAD BLK & LOADING ARM BLK. (Refer to REMOVAL OF THE EJECTOR BLK.)
- 2: Release the stopper of the IDLER PART (2) as shown in Fig. 1, then remove it.
- 3: Take off the review brake part spring, then release the stopper of the REVIEW BRAKE PART and remove it.
- 4: Reassemble these parts in the reverse order of 1 to 3.

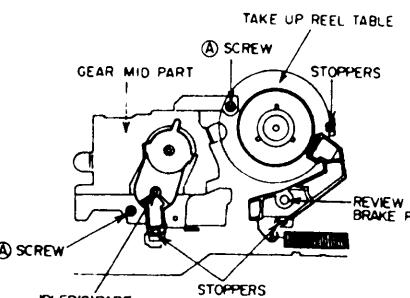


Fig 1.

## Replacement of the Gear Mid Part

- 1: Remove the REVIEW BRAKE PART and IDLER (2) PART with referring to the steps 1-4, above.

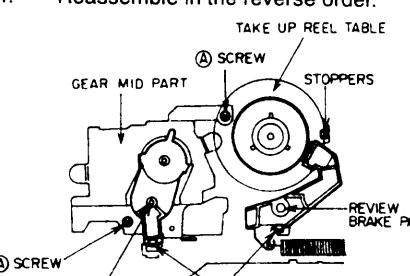


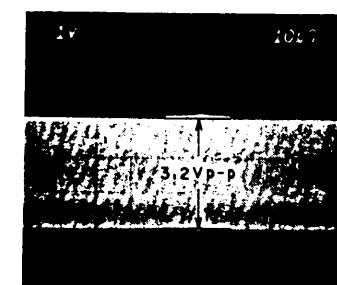
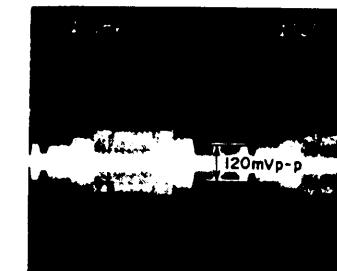
Fig 2.

## Head Motors and Miscellaneous

Part No.	Description
HR-405340J	Head Combo HVMZA1121A
HE-390013J	Head HVFME0020A
BV-V1123A410B	Lower Drum BLK X450EGN
BM-401296J	Motor E20EL89
BM-400682J1	Motor DFX-67B3VWB1 (Capstan Motor)
BM-387503J	Motor Part
BV-V1123A420B	Upper Drum BLK X450EGN

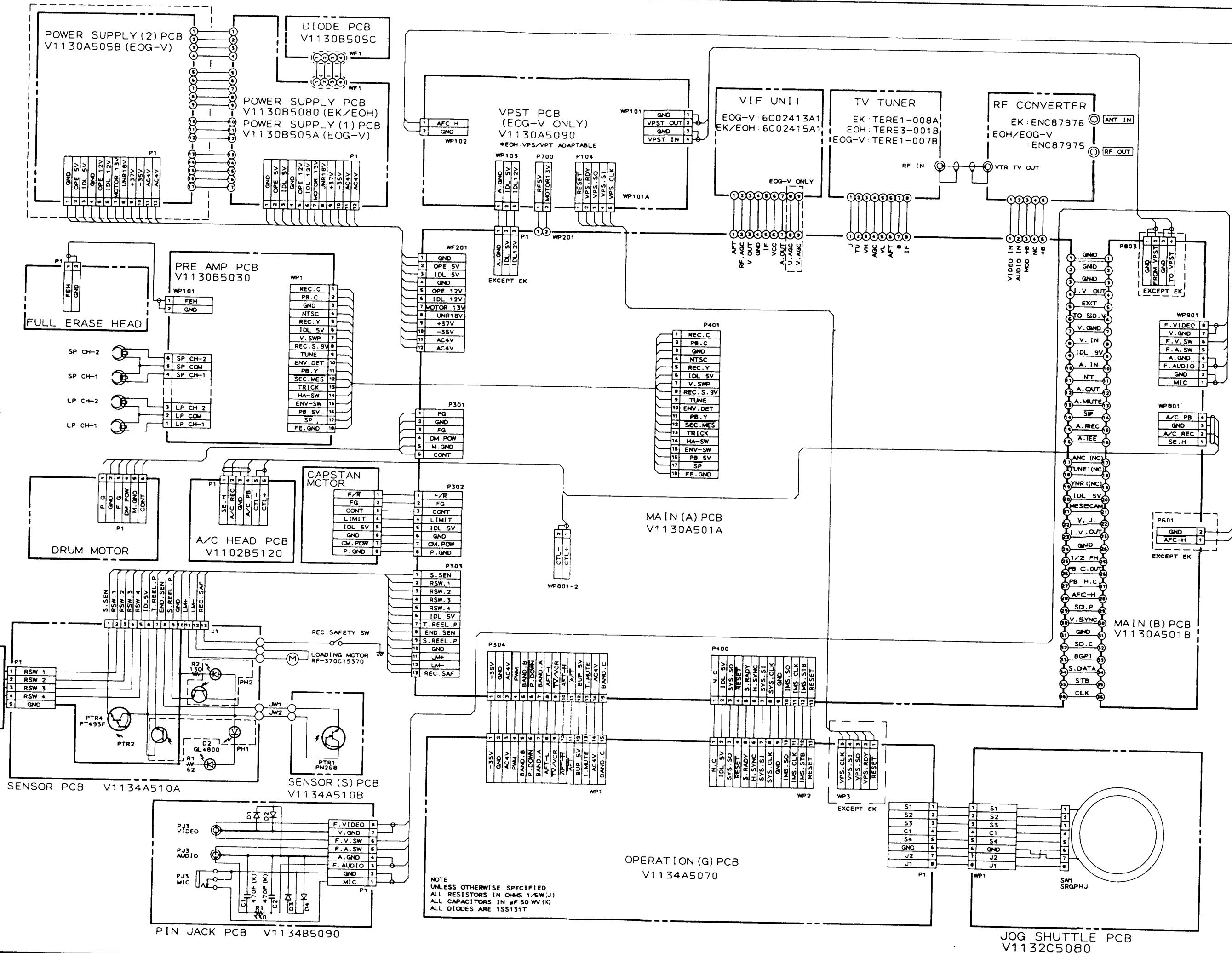
## Recommended Safety Parts

Item	Part No.	Description
<b>For EK/EOH</b>		
D1-12	ED-511907	D Silicon 1N4002 100/1.0A
D16	ED-404029J	D Zener H UTZJ10B T26
FR1-4	ER-400728J	R Fuse V TO5 RF25SCVTP1/4WR12K
FR5	ER-400605J	R Fuse V TO5 ERD2FCV 1/4W 15ROG
TR1	ET-381175J	TR 2SD1856
TR2	ET-366365	TR 2SB1185 E,F
TR3-6	ET-380685J	TR 2SD1761 E,F,G
<b>For (EOG-V)</b>		
D1-4	ED-511907	D Silicon 1N4002 100/1.0A
D6, D8, D11	ED-386226J	D Schottky RB100AT-32T26 40/1
D17, D18	ED-511907	D Silicon 1N4002 100/1.0A
FL1	EO-395035J	Coil LF PLH11C-1811R2
FL2	EO-339907	Coil LF FKOB160MH16 1000.0U
FR1	ER-400728J	R Fuse V TO5 RF25SCVTP1/4WR12K
FR2	ER-400688J	R Fuse V TO5 RF25SCVTP1/4WR10K
FR3	ER-400605J	R Fuse V TO5 ERD2FCV1/4W15ROG
FR4	ER-400689J	R Fuse V TO5 RF25SCVTP1/4WR68K
FR5	ER-405441J	R Fuse V TO5 RF25SCVTP1/4WR27K
FR6	ER-400689J	R Fuse V TO5 RF25SCVTP1/4WR68K
TR1-5	ET-366365	TR 2SB1185 E,F
TR6	ET-389808J	TR 2SB1425 E,U
TR9	ET-366365	TR 2SB1425 E,U
TR12	ET-380685J	TR 2SD1761 E,F,G
TR13	ET-366365	TR 2SB1185 E,F
<b>For (EOG-V)</b>		
IC1	EI-381575J	IC BA6121
TR2	ET-380685J	TR 2SD1761 E,F,G
TR4	ET-404195J	TR 2SC4486 S,T,TO5
TR7	ET-380685J	TR 2SD1761 E,F,G
BT-403872J	BT-403883J	Trans Pow V1130 EK (EK)
BT-403883J	BT-403873J	Trans Pow V1130 EOG-V (EOG-V)
		Trans Pow V1130 EO (EOH)



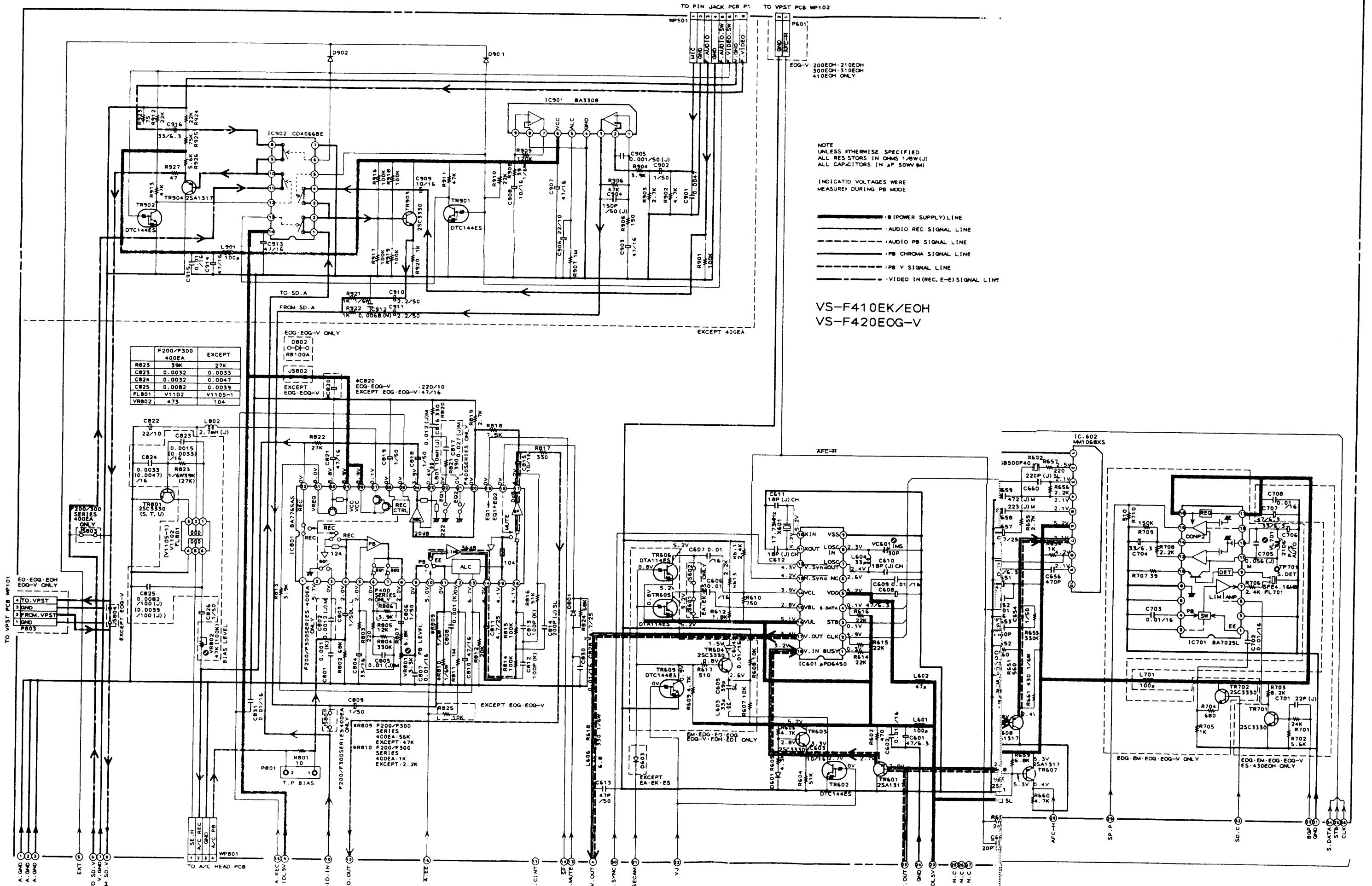
## Mechanical Parts List

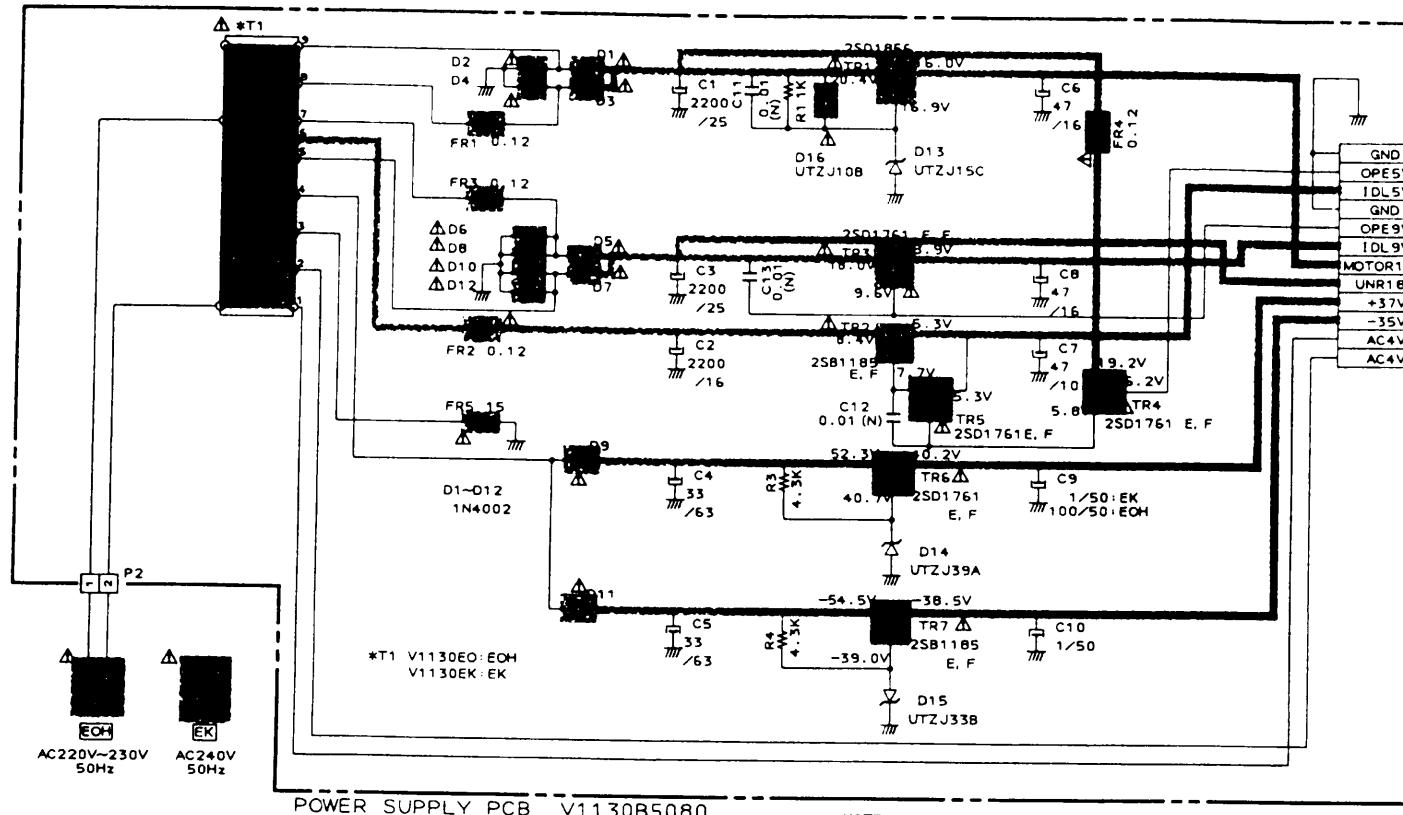
Description	Part No.	Description	Part No.	Description	Part No.
6SET20X030SCM PKR FP	ZS-374458	Holder D-LED	MZ-387430J	Slider Brake (3) Part	ML-404567J
6SET30X080SCM PKR CP	ZG-373900	Holder FE Head Part B	MZ-402760J	Slider Front Loading	ML-387428J
		Holder FPC	SZ-387388J	Slider Pinch Part	ML-387431J
		Arm Coupling	ML-387311J2	Slider Trigger (2)	ML-404944J
		Arm Damper	ML-391745J2	SLIT W17X032X025PSL	ZW-374445
		Arm Lid Opener	ML-387350J1	Socket 174074-5 SP (P1)	EJ-381837J
		Arm Loading BLK 425EA	BL-V1102A140A	Socket Housing	
		Arm Review Part	ML-387277J3	5062-30-10-13 (PS1)	EJ-387497J
		Arm Shutter	ML-387349J2	Leader S BLK 425EA	BV-V1102A070A
				Leader T BLK 425EA	BV-V1102A080A
				Lever Damper (S)	ML-387345J
				Lever Damper (T)	ML-387346J
				Lever Lock Release	ML-387344J
				Lever Trigger	ML-387402J1
				Lower Drum BLK X450EGN	BV-V1123A410B
				Capstan Brake Part	BL-387458J2
				Main Brake (S) Part	ML-387316J
				Main Brake (T) Part	ML-387318J
				Mecha Deck BLK F410EK	BB-V1130A020C
				(WP1)	EW-389313J
				Cushion Cover	SZ-391866J1
				Motor DFX-67B3VWB1	
				(Capstan Motor)	BM-400682J1
				Motor E20EL89	
				D LED GL451 Infrared (D1)	ED-390011J
				(Drum Motor)	BM-401296J
				Detector SG-105LF2	
				(PH1) (PH2)	ET-403420J
				Disk (3) Part	MT-404547
				Disk Clutch (2) Part	MZ-404577J
				DT BID30X06STL	
				CMT C080	ZS-389853J
				Earth Brush Part AG	VT-401282J
				Gear Cam Slider (3)	MZ-404538J
				Gear Eject	MZ-387335J
				Gear Front Loading	MZ-387333J
				Gear MID PART	MZ-404995J
				Gear Toggle (S) BLK 425EA	MZ-V1102A090A
				Gear Toggle (T) BLK 425EA	MZ-V1102A100A
				Gear Worm (2)	MZ-401686J
				Guide Front (2)	SE-395554J
				Guide Roller D8 PART	VT-387394J1
				Head Combo HVMZA1121A	HR-405340J
				Head E HVFME0020A	HE-390013J



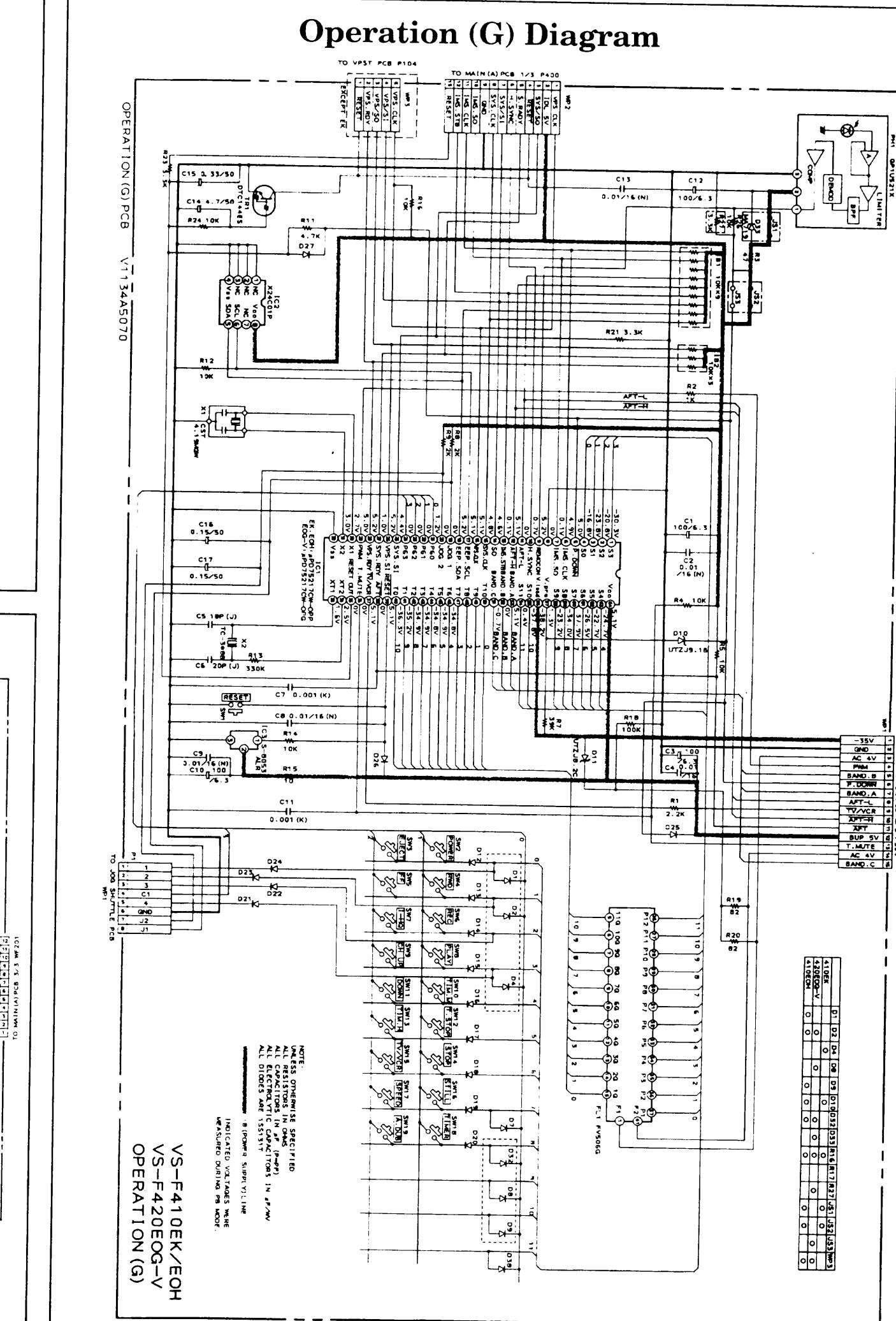
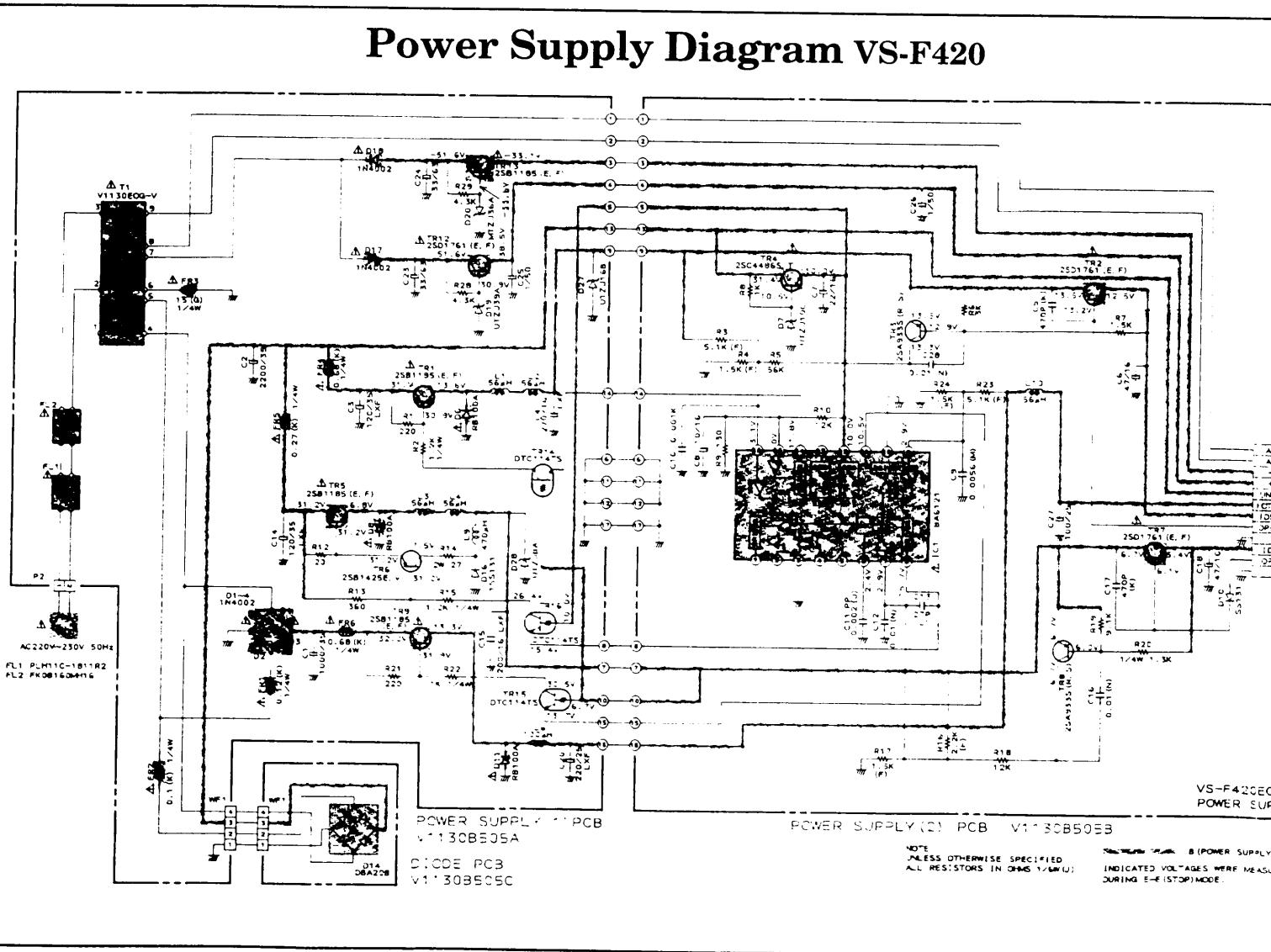
## AKAI VS-F410

## Main Diagram B





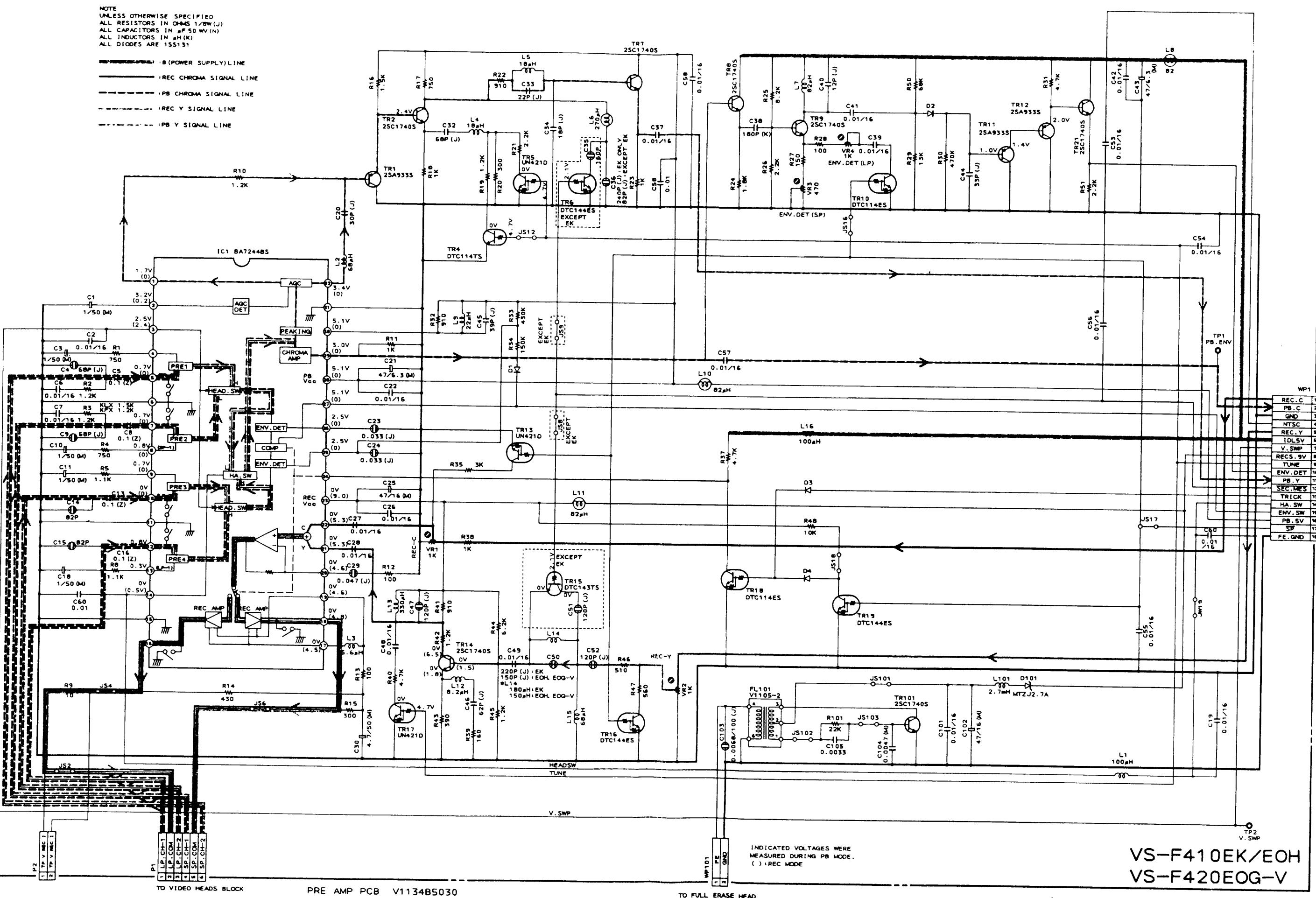
Power Supply Diagram VS-F410



## Pre Amp Diagram

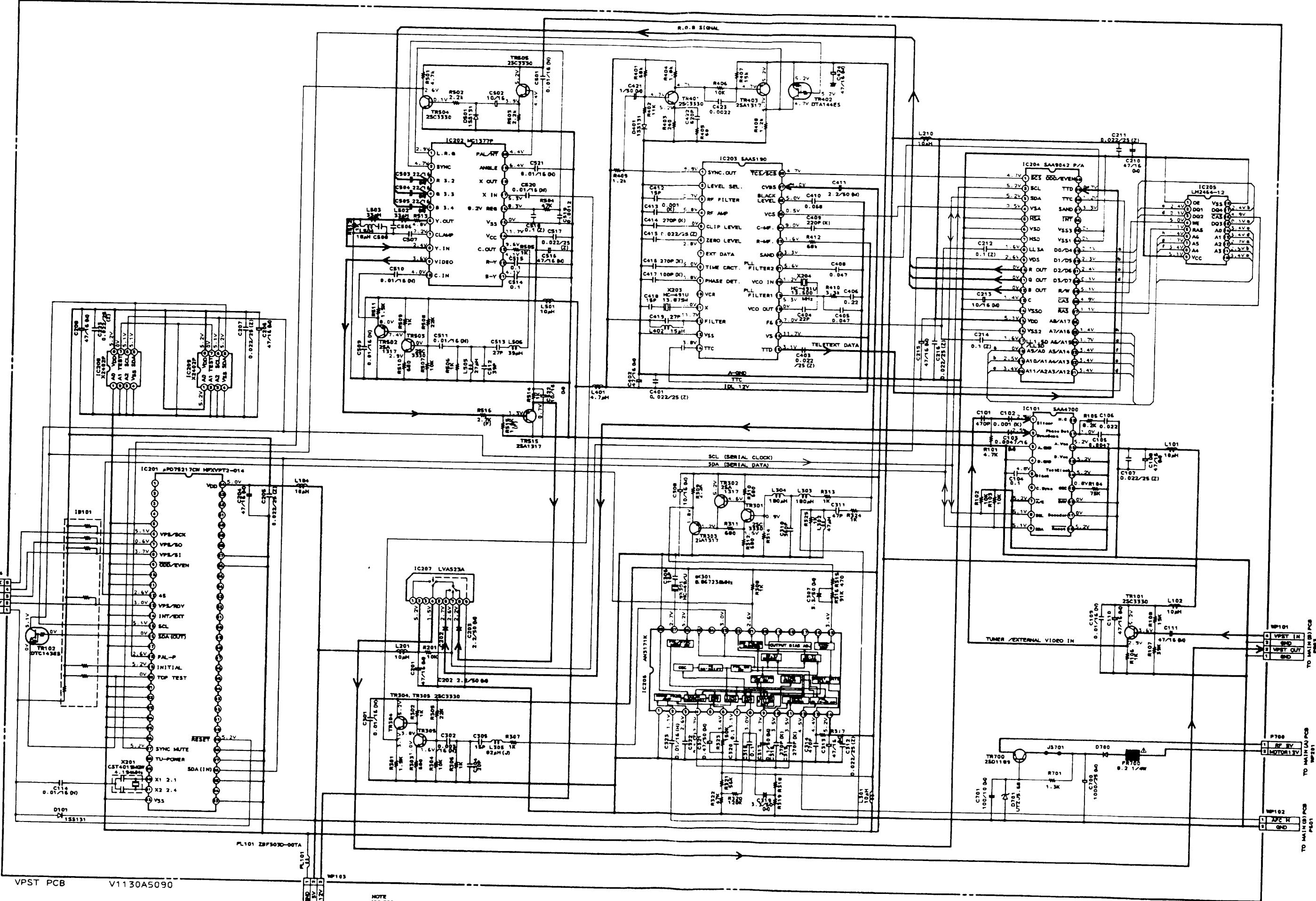
NOTE  
UNLESS OTHERWISE SPECIFIED  
ALL RESISTORS IN OHMS 1/BW (U)  
ALL CAPACITORS IN  $\mu$ F 50 WV (N)  
ALL INDUCTORS IN  $\mu$ H (K)  
ALL DIODES ARE 1SS131

- REC CHROMA SIGNAL LINE
- PB CHROMA SIGNAL LINE
- REC Y SIGNAL LINE
- PB Y SIGNAL LINE



VS-F410EK/EOH  
VS-F420EOG-V

## VPST Diagram



VPST PCB V1130A5090

V1130A5090

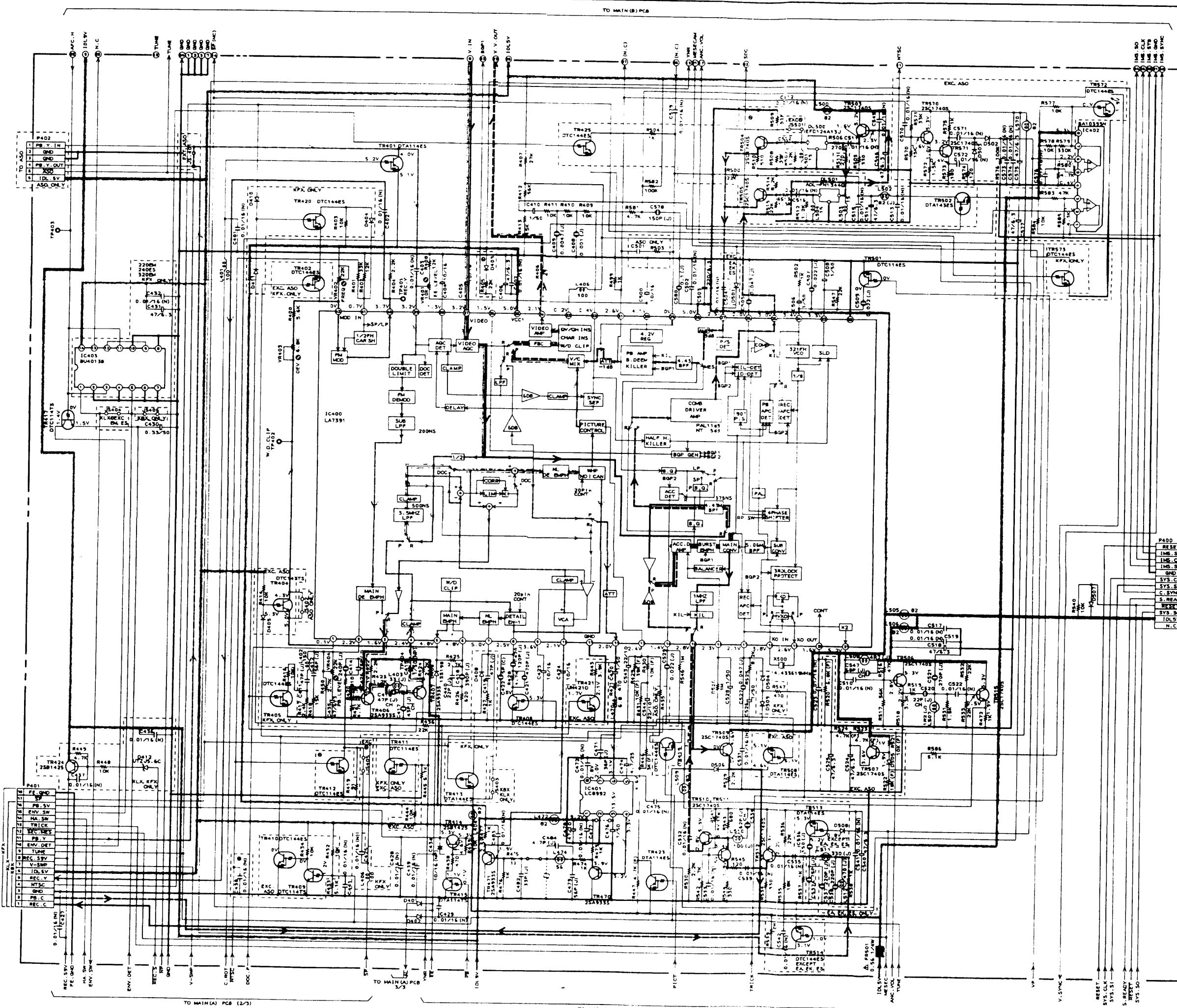
TO MAIN  
P1

NOTE  
UNLESS OTHERWISE SPECIFIED  
ALL RESISTORS IN OHMS 1/8W (U)  
ALL CAPACITORS IN MF 50VW (J)  
ALL INDUCTORS IN MH (K)  
ALL DIODES ARE 1SS131T

POWER SUPPLY (AL 10L) LINE  
VIDEO IN (REG E-E) SIGNAL

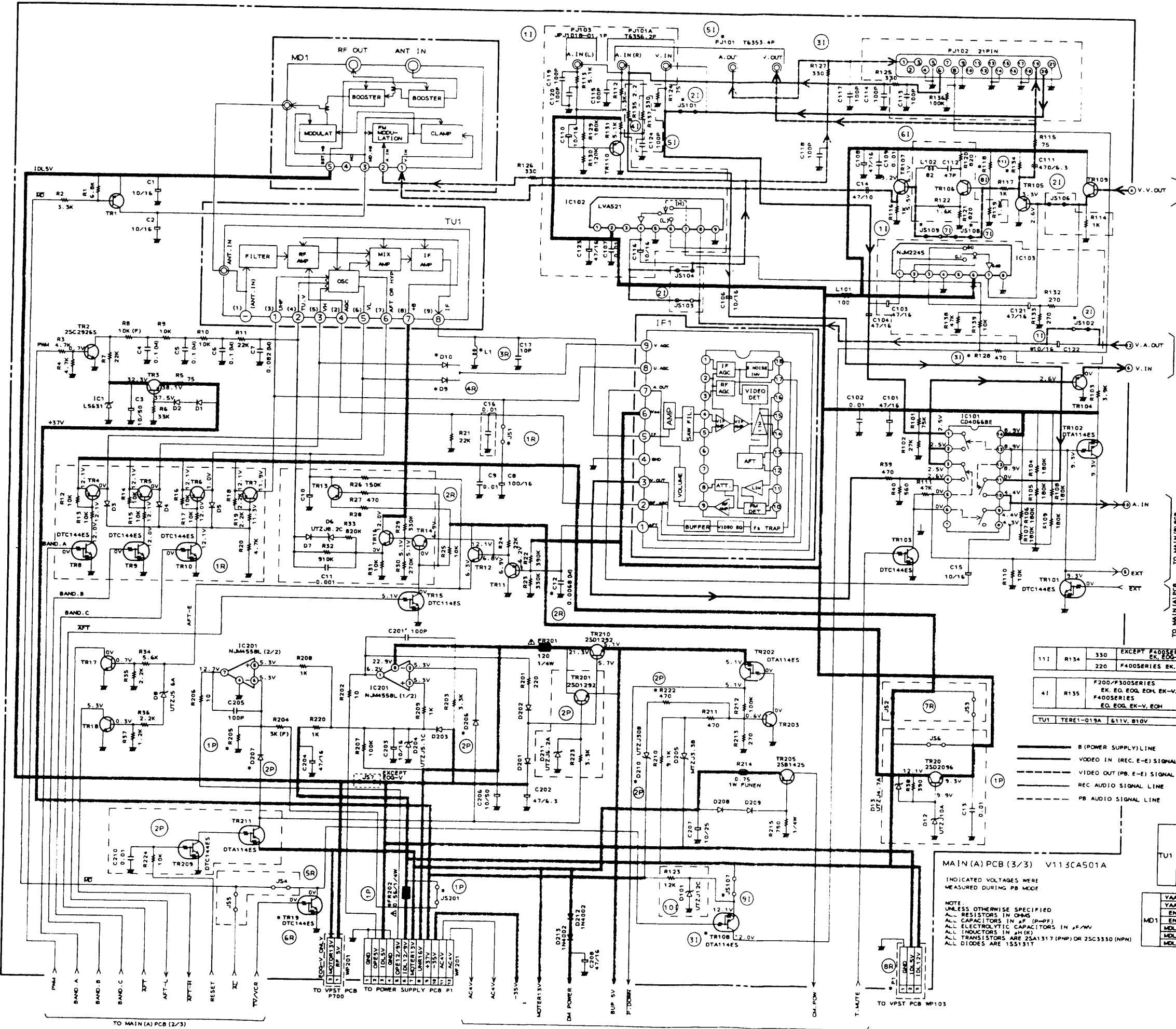
INDICATED VOLTAGES ARE MEASURED IN STOP MODE

VS-F420EOG-V  
VPST



Main  
Diagram 1/3

## Main Diagram 3/3



TR	TR4, TR5, TR7	2SA1317	EXCEPT EK, EK-V
	TR8, TR9	DTCA144E5	
	R12, R13, R14, R15	10K	
	R16, R19	2.2K	
	R20	4.7K	
	D3, D4	15S1317	EON ONLY
	TR6	2SA1317	
	TR1C	DTCA144E5	
	R16, R17	10K	
	D5	15S1317	
	JS1		EK, EK-V

	TR13	25A1317	
	R26	150K	
	R27	470	
	C10	1/50	EK, EK-V, EOG, EOG-V EA, EM, F200SERIES-ES
		2 2/50	EA, EOG, EDI, F400SERIES-ES
2R	R28	91C	EO, EOG, EOG-V, EK-V EA, EM, ES, EA, EGD, EDI
		560	
	TR14, TR16	25C3330	
	R29	330K	
	R30	270K	
	R31	10K	
	R32	91K	
	R33	820K	EOH ONLY
	C11	0.001	
	C12	0.0068 (M)	
	D7	1551317	
	D6	UTZJB.2C	

3R	L1	1.0 0.82 0.68 0.47 0.2	EA F400SERIES-EOM EK_EK-V_EM EM_611N KBX-EOM_KLX-EOM_EDG. EDI. ES 611V_B10V
4R	D9_D10	155131T	EQ. EOG. EOG-V
5R	JS4 JS5	EA_EM EXCEPT EA_EM	7R JS2 EXCEPT EK-V JS3 EK-V ONLY
6R	TR19	DTC144ES	EXCEPT ES. EDG. EDI
BR	P1	PH_3P	EQ_EOM_EOG_EOG-V_EK-V
1P	R205 TR20 D12 R30 C13 JS6	2.4K(F) 4.3K(F) 2SD2096 UTZ_110A 390 0.01 JS201	EQ_EOM_EOG_EOG-V_EK-V EA_EM_ES_EK_EDG. EDI EQ_EOM_EOG_EOG-V_EK-V EQ_EOM_EOG_EOG-V_EK-V FR202 EA_EU_ES_EK_EOG_EQI

		EE	EE	EE	EE	EE	EE	EE	EE	EE	EE	EE
	R222											
	R223											
	R224											
	D206, D207					15S131T						
	D210					UTZJ30B						
	D211					UTZJ6..2A						
	TR201					2SD129Z						
	TR209					DTC144E5						
	TR211					DTA144E5						
	C210					0..01						
2P											EOG	EOG-V ONLY

	TR110	C121	R138
	IC102	C122	R139
11	IC105	C125	
	C103	R112	
	C105	R113	F400SERIES
	C107	R129	EK. ECG-V
	C110	R130	
	C115	R131	
	C116	R132	
	C119	R133	
	C120	PJ101A	PJ101

	JS101	JS104	EXCEPT
21	JS102	JS106	F400SERIES
	JS103	R114	EK, EOG-V
	PJ102	R125	EK, EO, EOG
31	C115	R128	EK-V, EOG-V
	C114	R136	ECH, EOG

TR106		ECM
PJ101	R132	SA-600-SW

C112	R122	NAME: SAWYERS
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R112	R122	611N, 611VPS
R119	L102	610N, 610VPS
R120	TR106	SAL
R121		

71	JS108	JS109	EXCEPT 61
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81	R118	2.7K	61
		1K	EXCEPT 61

91 JS107 EO, EOQ, EOQ-V, EOM, EK-V

**F200SERIES F300SERIES F400SERIES**

TER51-002A	←	←
TER11-001A	←	←
TERB1-008A	←	←

VTSB6C2	←	←
ENV-57883P1	←	TERE3-001B
-V TERE1-007B	←	←

TUMUP3S-292 TERZI-004A ←

<b>EOQ, EOQ-V, EOH</b>	<b>KX EDG</b>	<b>EDG</b>
<b>EK-V, EK, EKV</b>	<b>KX EK</b>	<b>EK, EK-V</b>
<b>EM, EM-V</b>	<b>KX EM</b>	<b>EM</b>

	IF1	KX EOM KX EOM KX EOG KX EOG	EM EOM, 611N EOG, EOG-V EOG

/S-F410EK/EOH  
/S-F420EOG-V  
MAIN(A) (3/3)